

# WEST Search History

DATE: Wednesday, June 25, 2003

<u>Set Name</u> side by side	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u> result set
<i>DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=ADJ</i>			
L9	argj near5 coli	1	L9
L8	L7 and l6	3	L8
L7	arga with gene	17	L7
L6	acetylglutam\$ adj3 synthase	7	L6
L5	L1	1	L5
L4	L3	2	L4
<i>DB=USPT; PLUR=YES; OP=ADJ</i>			
L3	arga with gene	2	L3
L2	arga with gene\$	14	L2
L1	acetylglutam\$ adj3 synthase	1	L1

END OF SEARCH HISTORY

WEST

L8: Entry 2 of 3

File: PGPB

May 16, 2002

PGPUB-DOCUMENT-NUMBER: 20020058315

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020058315 A1

TITLE: Bacterium having ability to produce L-glutamic acid, L-proline or L-arginine and method for producing L-glutamic acid, L-proline or L-arginine

PUBLICATION-DATE: May 16, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Lunts, Maria Grigorievna	Moscow		RU	
Fomina, Svetlana Aleksandrovna	Moscow		RU	
Leonova, Tatyana Viktorovna	Moscow		RU	
Gusyatiner, Mikhail Markovich	Moscow		RU	

US-CL-CURRENT: 435/107; 435/252.33

## WEST

## End of Result Set

L1: Entry 1 of 1

File: USPT

Apr 22, 2003

DOCUMENT-IDENTIFIER: US 6551795 B1

TITLE: Nucleic acid and amino acid sequences relating to pseudomonas aeruginosa for diagnostics and therapeutics

Detailed Description Paragraph Table (228) :

aeruginosa) 26736533\_f1\_57 7534 24105 2451 816 341 -27 Escherichia coli P77338  
 (de:aefa protein) 2447637\_f1\_58 7535 24106 972 323 243 -20 Bacillus P39587  
 (de:hypothetical 44.4 kd protein in subtilis/Bacillus epr-galk intergenic region)  
 globigii 25995431\_f1\_63 7536 24107 1254 417 16033341\_f1\_66 7537 24108 471 156  
 17066668\_f1\_67 7538 24109 2718 905 113 -4 Aspergillus Contig1423 GTC ORF with score  
 289 to: fumigatus (ai:7000792986) (or:Pseudomonas aeruginosa) 521008\_f1\_69 7539 24110  
 954 317 355 -32 Pseudomonas AF087482 (de:pseudomonas aeruginosa clcc and aeruginosa  
 ohbh genes, lys-r type regulatory protein (clcr), chlorocatechol-1,2-dioxygenase  
 (clca), chloromuconate cycloisomerase (clcb), dienelactone hydrolase (clcd),  
 malcyacetate reductase (clce) transposas . . . 32714691\_f1\_72 7540 24111 861 286 121  
 -4 Nephila clavipes A44112 3255417\_f1\_73 7541 24112 477 158 100 -6 Klebsiella  
 Contig470A GTC ORF with score 100 to: pneumoniae (ai:7000782040) (or:Pseudomonas  
 aeruginosa) 31345217\_f1\_80 7542 24113 552 183 107 -6 Klebsiella Contig559A GTC ORF  
 with score 131 to: pneumoniae (ai:7000707509) (or:Mytilus edulis) (sr:blue mussel)  
 (de:mytilus edulis precollagen d (precol-d) mrna, complete cds.) 268 6530\_f1\_81 7543  
 24114 2724 907 128 -4 Salmonella U43350 (sr:salmonella enterica strain=s2978)  
 entericia (de:salmonella enterica isocitrate lyasc (acea) gene, partial cds,  
 isocitrate dehydrogenase kinase/phosphatase (acek) gene, complete cds.)  
 21881451\_f1\_86 7544 24115 591 196 302 -28 Rickettsia AJ235269 Rickettsia prowazekii  
 strain Madrid E, prowazekii complete genome. 12130325\_f1\_93 7545 24116 1008 335 320  
 -29 Enterobacter CONTIG223 GTC ORF with score 320 to: cloacae (ai:7000782060)  
 (or:Pseudomonas aeruginosa) 21658316\_f1\_98 7546 24117 1251 416 1421 -145 Chromatium  
 AF034104 (de:chromatium vinosum pet operon fe-s vinosum protein (peta), cytochrome  
 b(petb), and cytochrome c1 (petc) genes, complete cds.) 13128756\_f1\_99 7547 24118 837  
 278 555 -53 Escherichia coli P05838 (de:stringent starvation protein a)  
 29926568\_f1\_100 7548 24119 666 221 183 -14 Enterobacter CONTIG96 GTC ORF with score  
 509 to: cloacae (ai:7501735549) (or:Klebsiella pneumoniae) 26073586\_f1\_102 7549 24120  
 1740 579 845 -84 Escherichia coli P45528 (de:hypothetical 31.3 kd protein in agai-mtr  
 intergenic region (1286)) 35258292\_f1\_104 7550 24121 1011 336 849 -85 Escherichia  
 coli P18595 (de:hypothetical 34.9 kd protein in frur-ftsl intergenic region (orfb))  
 35754131\_f1\_109 7551 24122 1335 444 243 -20 Pseudomonas Q59650 (ec:6.3.2.13) (de:(ec  
 6.3.2.13) (udp-n- aeruginosa acetyl muramyl-tripeptide synthetase) (fragment))  
 14938330\_f1\_111 7552 24123 360 119 98 -5 Aspergillus Contig8078 GTC ORF with score  
 219 to: (ai:175260) fumigatus (or:Volvox carteri) 12938505\_f1\_114 7553 24124 1173 390  
 728 -72 Escherichia coli P17443 (ec:2.4.1.--) (de:(ec 2.4.1.--)) 31899066\_f1\_116 7554  
 24125 1653 550 782 -78 Escherichia coli P07862 (ec:6.3.2.4) (de:synthetase))  
 35353408\_f1\_117 7555 24126 867 288 314 -28 Escherichia coli P06136 (de:cell division  
 protein ftsq) 15057878\_f1\_118 7556 24127 1089 362 1249 -127 Pseudomonas AF038380  
 (de:pseudomonas putida cell division putida protein ftsa gene, complete cds.)  
 (nt:cell division protein; similar to pseudomonas) 34649187\_f1\_120 7557 24128 1203  
 400 1949 -201 Pseudomonas P47204 (de:cell division protein ftsz) aeruginosa  
 4478403\_f1\_125 7558 24129 927 308 292 -27 Rickettsia AJ235269 Rickettsia prowazekii  
 strain Madrid E, prowazekii complete genome. 16538252\_f1\_126 7559 24130 1803 600 112  
 -3 Beta vulgaris S51939 (sr:, beet) (ec:3.2.1.14) 31345436\_f1\_128 7560 24131 1905 634  
 1016 -102 Neisseria P38434 (ec:2.3.1.35:2.3.1.1) (de:acetyltransferase, gonorrhoeae  
 (n-acetylglutamate synthase) (ags)) 4978812\_f1\_129 7561 24132 723 240 127 -6

Caenorhabditis Z66560 (de:caenorhabditis elegans cosmid d1053, elegans complete sequence.) (nt:similar to glutathione s-transferase) 10006890\_f1\_137 7562 24133 2241 746 110 -4 Aspergillus Contig845S GTC ORF with score 110 to: fumigatus (ai:7000782104) (or:Pseudomonas aeruginosa) 10972707\_f1\_138 7563 24134 1008 335 4322250\_f1\_139 7564 24135 1011 336 25417281\_f1\_155 7565 24136 741 246 779 -77 Pseudomonas Y09798 (de:p.fluorescens colr, cols and ori122 fluorescens genes.) (nt:function unknown) 34277308\_f1\_170 7566 24137 426 141 102 -6 Klebsiella Contig438A GTC ORF with score 115 to: pneumoniae (ai:7000772235) (or:Pseudomonas aeruginosa) 10058341\_f1\_174 7567 24 138 1224 407 114 -6 Vibrio cholorae AJ231113 (de:vibrio cholorae z54f gene.) 24738342\_f1\_175 7568 24139 1494 497 10987705\_f1\_176 7569 24140 996 331 1277305\_f1\_177 7570 24141 2001 666 254 -21 Enterobacter CONTIG463 GTC ORF with score 1613 to: (ai:7501765603) (or:Klebsiella pneumoniae) 36020430\_f1\_178 7571 24142 1176 391 407 -38 Klebsiella Contig396A GTC ORF with score 407 to: pneumoniae (ai:7000782145) (or:Pseudomonas aeruginosa) 1072705\_f1\_179 7572 24143 474 157 217 -18 Escherichia coli P24194 (de:chromosome initiation inhibitor (oric replication inhibitor)) 31895887\_f1\_181 7573 24144 1449 482

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for

# NiceZyme View of ENZYME: EC 2.3.1.1

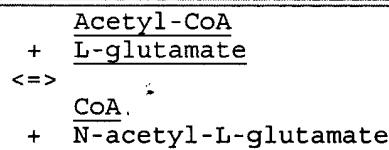
## Official Name

Amino-acid N-acetyltransferase.

## Alternative Name(s)

None.

## Reaction catalysed



## Comments

- Also acts with L-aspartate and, more slowly, with some other amino acids.

## Cross-references

Biochemical Pathways; map number(s)	<a href="#">G7</a> , <a href="#">H7</a>
BRENDA	<a href="#">2.3.1.1</a>
EMP/PUMA	<a href="#">2.3.1.1</a>
WIT	<a href="#">2.3.1.1</a>
KYOTO UNIVERSITY LIGAND CHEMICAL DATABASE	<a href="#">2.3.1.1</a>
IUBMB Enzyme Nomenclature	<a href="#">2.3.1.1</a>
MEDLINE	Find literature relating to 2.3.1.1
Swiss-Prot	<a href="#">O66143</a> , <a href="#">ARGA_BUCAI</a> ; <a href="#">P59099</a> , <a href="#">ARGA_BUCAP</a> ; <a href="#">P08205</a> , <a href="#">ARGA_ECOLI</a> ; <a href="#">Q9JW21</a> , <a href="#">ARGA_NEIMA</a> ; <a href="#">Q9JXU9</a> , <a href="#">ARGA_NEIMB</a> ; <a href="#">Q9CMJ6</a> , <a href="#">ARGA_PASMU</a> ; <a href="#">P22567</a> , <a href="#">ARGA_PSEAE</a> ; <a href="#">P32042</a> , <a href="#">ARGA_PSEPK</a> ; <a href="#">Q8XZZ5</a> , <a href="#">ARGA_RALSO</a> ; <a href="#">Q8Z421</a> , <a href="#">ARGA_SALT1</a> ; <a href="#">Q8ZMB8</a> , <a href="#">ARGA_SALTY</a> ; <a href="#">P59292</a> , <a href="#">ARGA_SHEON</a> ; <a href="#">P59293</a> , <a href="#">ARGA_SHIFL</a> ; <a href="#">Q9KPQ0</a> , <a href="#">ARGA_VIBCH</a> ; <a href="#">P59294</a> , <a href="#">ARGA_VIBVU</a> ; <a href="#">Q8ZH86</a> , <a href="#">ARGA_YERPE</a> ; <a href="#">Q8UA56</a> , <a href="#">ARGJ_AGRT5</a> ; <a href="#">O67100</a> , <a href="#">ARGJ_AQUAE</a> ; <a href="#">O29118</a> , <a href="#">ARGJ_ARCFU</a> ; <a href="#">Q9ZJ14</a> , <a href="#">ARGJ_BACAM</a> ; <a href="#">Q9K8V3</a> , <a href="#">ARGJ_BACHD</a> ; <a href="#">Q07908</a> , <a href="#">ARGJ_BACST</a> ; <a href="#">P36843</a> , <a href="#">ARGJ_BACSU</a> ; <a href="#">Q8G5F0</a> , <a href="#">ARGJ_BIFLO</a> ; <a href="#">P59610</a> , <a href="#">ARGJ_BRAJA</a> ; <a href="#">Q8YJF9</a> , <a href="#">ARGJ_BRUME</a> ; <a href="#">Q8FY2</a> , <a href="#">ARGJ_BRUSU</a> ; <a href="#">Q9A3Y4</a> , <a href="#">ARGJ_CAUCR</a> ; <a href="#">P59611</a> , <a href="#">ARGJ_CHLTE</a> ; <a href="#">Q9RTQ2</a> , <a href="#">ARGJ_DEIRA</a> ; <a href="#">Q93EJ3</a> , <a href="#">ARGJ_HELHP</a> ; <a href="#">Q9CHD4</a> , <a href="#">ARGJ_LACLA</a> ; <a href="#">O08319</a> , <a href="#">ARGJ_LACPL</a> ; <a href="#">Q8EYV8</a> , <a href="#">ARGJ_LEPIN</a> ; <a href="#">Q92BB8</a> , <a href="#">ARGJ_LISIN</a> ; <a href="#">Q8Y6U2</a> , <a href="#">ARGJ_LISMO</a> ; <a href="#">Q8TK55</a> , <a href="#">ARGJ_METAC</a> ; <a href="#">Q8TX15</a> , <a href="#">ARGJ_METKA</a> ; <a href="#">Q8PZL8</a> , <a href="#">ARGJ_METMA</a> ; <a href="#">O26284</a> , <a href="#">ARGJ_METTH</a> ; <a href="#">Q9CC14</a> , <a href="#">ARGJ_MYCLE</a> ; <a href="#">P94988</a> , <a href="#">ARGJ_MYCTU</a> ; <a href="#">P38434</a> , <a href="#">ARGJ_NEIGO</a> ; <a href="#">Q9JRR2</a> , <a href="#">ARGJ_NEIMA</a> ; <a href="#">Q8CUN1</a> , <a href="#">ARGJ_OCEIH</a> ; <a href="#">Q8XVJ7</a> , <a href="#">ARGJ_RALSO</a> ; <a href="#">Q98G72</a> , <a href="#">ARGJ_RHIL0</a> ; <a href="#">Q92MJ1</a> , <a href="#">ARGJ_RHIME</a> ; <a href="#">P96426</a> , <a href="#">ARGJ_RHOFA</a> ; <a href="#">Q99X38</a> , <a href="#">ARGJ_STAAM</a> ; <a href="#">Q8NYM7</a> , <a href="#">ARGJ_STAAW</a> ; <a href="#">Q8CSF9</a> , <a href="#">ARGJ_STAEP</a> ; <a href="#">Q9LCS7</a> , <a href="#">ARGJ_STRCL</a> ; <a href="#">Q8DV45</a> , <a href="#">ARGJ_STRMU</a> ; <a href="#">Q8DHN4</a> , <a href="#">ARGJ_SYNEL</a> ; <a href="#">P74122</a> , <a href="#">ARGJ_SYN3</a> ; <a href="#">Q9X2A3</a> , <a href="#">ARGJ_THEME</a> ;

	<a href="#">Q9Z4S1</a> , ARGJ_THENE;	<a href="#">Q8R7B9</a> , ARGJ_THETN;	<a href="#">Q04728</a> , ARGJ_YEAST;
	<a href="#">Q9K3D6</a> , ARHA_MORS3;	<a href="#">Q9K3D7</a> , ARHA_MORS4;	<a href="#">Q8YVA8</a> , ARJ1_ANASP;
	<a href="#">Q97GH6</a> , ARJ1_CLOAB;	<a href="#">Q8YPF9</a> , ARJ2_ANASP;	<a href="#">Q97ET6</a> , ARJ2_CLOAB;

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1: Y00492. *E. coli* argA gene...[gi:40952]

Links

LOCUS ECARGA 1575 bp DNA linear BCT 10-FEB-1999  
 DEFINITION *E. coli* argA gene for N-acetylglutamate synthase (EC 2.3.1.1).  
 ACCESSION Y00492  
 VERSION Y00492.1 GI:40952  
 KEYWORDS argA gene; N-acetylglutamate synthase.  
 SOURCE Escherichia coli  
 ORGANISM Escherichia coli  
 Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae; Escherichia.  
 REFERENCE 1 (bases 1 to 1575)  
 AUTHORS Brown, K., Finch, P.W., Hickson, I.D. and Emmerson, P.T.  
 TITLE Complete nucleotide sequence of the *Escherichia coli* argA gene  
 JOURNAL Nucleic Acids Res. 15 (24), 10586 (1987)  
 MEDLINE 88096590  
 PUBMED 3320971  
 REFERENCE 2 (bases 1 to 1575)  
 AUTHORS Emmerson, P.T.  
 TITLE Direct Submission  
 JOURNAL Submitted (06-JAN-1988) Emmerson P.T., University of Newcastle upon Tyne, Dept. of Biochemistry, Medical School, NE2 4HH, UK  
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1501 ttactgcccc agagaaaaa gcagttgtac aactaccagc gtaaatccaa agtgttgc  
1561 gcggatttag ggtaa

//

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NEWS 14 Nov 25 More calculated properties added to REGISTRY  
NEWS 15 Dec 04 CSA files on STN  
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NEWS 17 Dec 17 TOXCENTER enhanced with additional content  
NEWS 18 Dec 17 Adis Clinical Trials Insight now available on STN  
NEWS 19 Jan 29 Simultaneous left and right truncation added to COMPENDEX,  
ENERGY, INSPEC  
NEWS 20 Feb 13 CANCERLIT is no longer being updated  
NEWS 21 Feb 24 METADEX enhancements  
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NEWS 23 Feb 24 TEMA now available on STN  
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NEWS 29 Mar 24 Additional information for trade-named substances without  
structures available in REGISTRY  
NEWS 30 Apr 11 Display formats in DGENE enhanced  
NEWS 31 Apr 14 MEDLINE Reload  
NEWS 32 Apr 17 Polymer searching in REGISTRY enhanced  
NEWS 33 Jun 13 Indexing from 1947 to 1956 added to records in CA/CAPLUS  
NEWS 34 Apr 21 New current-awareness alert (SDI) frequency in  
WPIDS/WPINDEX/WPIX  
NEWS 35 Apr 28 RDISCLOSURE now available on STN  
NEWS 36 May 05 Pharmacokinetic information and systematic chemical names  
added to PHAR  
NEWS 37 May 15 MEDLINE file segment of TOXCENTER reloaded  
NEWS 38 May 15 Supporter information for ENCOMPPAT and ENCOMPLIT updated  
NEWS 39 May 16 CHEMREACT will be removed from STN  
NEWS 40 May 19 Simultaneous left and right truncation added to WSCA  
NEWS 41 May 19 RAPRA enhanced with new search field, simultaneous left and  
right truncation  
NEWS 42 Jun 06 Simultaneous left and right truncation added to CBNB  
NEWS 43 Jun 06 PASCAL enhanced with additional data  
NEWS 44 Jun 20 2003 edition of the FSTA Thesaurus is now available  
NEWS 45 Jun 25 HSDB has been reloaded

NEWS EXPRESS April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT

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NEWS INTER AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003  
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FILE 'WPIDS' ENTERED AT 18:20:20 ON 25 JUN 2003  
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=> s acetylglutam? (3w) (synthase or synthetase)  
L1 609 ACETYLGLUTAM? (3W) (SYNTHASE OR SYNTHETASE)

=> s 11 (5a) (gene? or dna or nucle?)  
2 FILES SEARCHED...  
5 FILES SEARCHED...

6 FILES SEARCHED...  
9 FILES SEARCHED...  
L2 94 L1 (5A) (GENE? OR DNA OR NUCLE?)

=> dup rem 12  
PROCESSING COMPLETED FOR L2  
L3 29 DUP REM L2 (65 DUPLICATES REMOVED)

=> d 1-10

L3 ANSWER 1 OF 29 MEDLINE DUPLICATE 1  
AN 2003130016 MEDLINE  
DN 22531184 PubMed ID: 12594532  
TI Null mutations in the N-acetylglutamate synthase gene associated with acute neonatal disease and hyperammonemia.  
AU Caldovic Ljubica; Morizono Hiroki; Panglao Maria Gracia; Cheng Sabrina F; Packman Seymour; Tuchman Mendel  
CS Children's Research Institute, Children's National Medical Center, The George Washington University, 111 Michigan Avenue NW, Washington, DC 20010, USA.  
NC DK47870 (NIDDK)  
HD32652 (NICHD)  
HD40677 (NICHD)  
RR01271 (NCRR)  
RR13297 (NCRR)  
SO HUMAN GENETICS, (2003 Apr) 112 (4) 364-8.  
Journal code: 7613873. ISSN: 0340-6717.  
CY Germany: Germany, Federal Republic of  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
EM 200305  
ED Entered STN: 20030320  
Last Updated on STN: 20030517  
Entered Medline: 20030516

L3 ANSWER 2 OF 29 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI  
AN 2002-16737 BIOTECHDS  
TI Microorganism for the production of L-arginine, comprises a recombinant DNA gene coding for an enzyme having ornithine acetyltransferase activity; involving recombinant vector plasmid DNA-mediated ornithine-acetyltransferase and expression in *Escherichia coli* culture medium optimization and fermentation  
AU SAKANYAN V; MARC F; HOVSEPYAN A; LECOCQ M  
PA AJINOMOTO CO INC  
PI EP 1201758 2 May 2002  
AI EP 2000-403003 27 Oct 2000  
PRAI EP 2000-403003 27 Oct 2000  
DT Patent  
LA English  
OS WPI: 2002-428567 [46]

L3 ANSWER 3 OF 29 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI  
AN 2002-10205 BIOTECHDS  
TI Novel mutant N-acetylglutamate synthase which desensitizes feedback inhibition by L-arginine, useful in biosynthesis of arginine by *Escherichia coli*; vector-mediated gene transfer and expression in host cell for strain improvement  
AU PTITSYN L R; ALTMAN I B; SMIRNOV S V; ROSTOVA Y G; YAMPOLSKAYA T A; LEONOVA T V; GUSYATINER M M  
PA AJINOMOTO CO INC  
PI EP 1170361 9 Jan 2002  
AI EP 2000-114572 28 Jun 2000  
PRAI RU 2001-112869 15 May 2001  
DT Patent  
LA English  
OS WPI: 2002-165893 [22]

L3 ANSWER 4 OF 29 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE  
3  
AN 2003:46777 BIOSIS  
DN PREV200300046777  
TI N-acetylglutamate synthase deficiency and the treatment of hyperammonemic  
encephalopathy.  
AU Elpeleg, Orly (1); Shaag, Avraham; Ben-Shalom, Efrat; Schmid, Tal;  
Bachmann, Claude  
CS (1) Metabolic Disease Unit, Shaare-Zedek Medical Center, Jerusalem, 91031,  
Israel: elpeleg@cc.huji.ac.il Israel  
SO Annals of Neurology, (December 2002, 2002) Vol. 52, No. 6, pp. 845-849.  
print.  
ISSN: 0364-5134.  
DT Article  
LA English

L3 ANSWER 5 OF 29 MEDLINE DUPLICATE 4  
AN 2002307909 MEDLINE  
DN 22045052 PubMed ID: 12049647  
TI Identification, cloning and expression of the mouse N-  
acetylglutamate synthase gene.  
AU Caldovic Ljubica; Morizono Hiroki; Yu Xiaolin; Thompson Mark; Shi  
Dashuang; Gallegos Rene; Allewell Norma M; Malamy Michael H; Tuchman  
Mendel  
CS Children's Research Institute, Children's National Medical Center, George  
Washington University, 111 Michigan Ave NW, Washington, DC 20010, USA.  
NC DK47870 (NIDDK)  
HD32652 (NICHD)  
HD40677 (NICHD)  
SO BIOCHEMICAL JOURNAL, (2002 Jun 15) 364 (Pt 3) 825-31.  
Journal code: 2984726R. ISSN: 0264-6021.  
CY England: United Kingdom  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
OS GENBANK-AF462069  
EM 200208  
ED Entered STN: 20020611  
Last Updated on STN: 20020831  
Entered Medline: 20020815

L3 ANSWER 6 OF 29 MEDLINE DUPLICATE 5  
AN 2002697799 MEDLINE  
DN 22347014 PubMed ID: 12459178  
TI Cloning and expression of the human N-acetylglutamate  
synthase gene.  
AU Caldovic Ljubica; Morizono Hiroki; Gracia Panglao Maria; Gallegos Rene; Yu  
Xiaolin; Shi Dashuang; Malamy Michael H; Allewell Norma M; Tuchman Mendel  
CS Children's Research Institute, Children's National Medical Center, The  
George Washington University, 111 Michigan Ave NW, Washington, DC 20010,  
USA.  
NC DK47870 (NIDDK)  
HD 40677 (NICHD)  
HD32652 (NICHD)  
SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (2002 Dec 13) 299 (4)  
581-6.  
Journal code: 0372516. ISSN: 0006-291X.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
OS GENBANK-AY158070  
EM 200301  
ED Entered STN: 20021217  
Last Updated on STN: 20030125  
Entered Medline: 20030124

L3 ANSWER 7 OF 29 SCISEARCH COPYRIGHT 2003 THOMSON ISI

AN 2002:161902 SCISEARCH  
GA The Genuine Article (R) Number: 511EY  
TI Isolation of an N-acetylglutamate synthase or  
kinase-like mammalian gene.  
AU Caldovic L (Reprint); Morizono H; Shi D S; Tuchman M  
CS Childrens Natl Med Ctr, Washington, DC 20010 USA  
CYA USA  
SO BIOPHYSICAL JOURNAL, (JAN 2002) Vol. 82, No. 1, Part 2, pp. 437A-437A. MA  
2130.  
Publisher: BIOPHYSICAL SOCIETY, 9650 ROCKVILLE PIKE, BETHESDA, MD  
20814-3998 USA.  
ISSN: 0006-3495.  
DT Conference; Journal  
LA English  
REC Reference Count: 0

L3 ANSWER 8 OF 29 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
AN 2002:353138 BIOSIS  
DN PREV200200353138  
TI Isolation of an N-acetylglutamate synthase or  
kinase-like mammalian gene.  
AU Caldovic, Ljubica (1); Morizono, Hiroki (1); Shi, Dashuang (1); Tuchman,  
Mendel (1)  
CS (1) Childrens National Medical Center, 111 Michigan Ave NW, Washington,  
DC, 20010 USA  
SO Biophysical Journal, (January, 2002) Vol. 82, No. 1 Part 2, pp. 437a.  
<http://intl.biophysj.org/>. print.  
Meeting Info.: 46th Annual Meeting of the Biophysical Society San  
Francisco, California, USA February 23-27, 2002  
ISSN: 0006-3495.  
DT Conference  
LA English

L3 ANSWER 9 OF 29 SCISEARCH COPYRIGHT 2003 THOMSON ISIDUPLICATE 6  
AN 2003:348703 SCISEARCH  
GA The Genuine Article (R) Number: 594AC  
TI Cloning and characterization of the human n-acetylglutamate  
synthase gene.  
AU Caldovic L M (Reprint); Morizono H; Gallegos R; Malamy M H; Tuchman M  
CS CNMC, Ctr Genet Med, Washington, DC USA; Tufts Univ, Dept Microbiol,  
Boston, MA 02111 USA  
CYA USA  
SO AMERICAN JOURNAL OF HUMAN GENETICS, (OCT 2002) Vol. 71, No. 4, Supp. [S],  
pp. 424-424. MA 1483.  
Publisher: UNIV CHICAGO PRESS, 1427 E 60TH ST, CHICAGO, IL 60637-2954 USA.  
ISSN: 0002-9297.  
DT Conference; Journal  
LA English  
REC Reference Count: 0

L3 ANSWER 10 OF 29 SCISEARCH COPYRIGHT 2003 THOMSON ISI  
AN 2002:385721 SCISEARCH  
GA The Genuine Article (R) Number: 536RA  
TI Identification, cloning and expression of the mouse N-  
acetylglutamate synthase gene  
AU Caldovic L (Reprint); Morizono H; Yu X L; Thompson M; Shi D H; Gallegos R;  
Allewell N M; Malamy M H; Tuchman M  
CS Childrens Natl Med Ctr, Childrens Res Inst, Washington, DC 20010 USA; Univ  
Maryland, Coll Life Sci, College Pk, MD 20742 USA; Tufts Univ, Dept  
Microbiol, Boston, MA 02155 USA  
CYA USA  
SO PEDIATRIC RESEARCH, (APR 2002) Vol. 51, No. 4, Part 2, Supp. [S], pp.  
228A-228A. MA 1328.  
Publisher: INT PEDIATRIC RESEARCH FOUNDATION, INC, 351 WEST CAMDEN ST,  
BALTIMORE, MD 21201-2436 USA.  
ISSN: 0031-3998.  
DT Conference; Journal  
LA English  
REC Reference Count: 0

=> d 11-20

L3 ANSWER 11 OF 29 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
AN 2002:472895 BIOSIS  
DN PREV200200472895  
TI Identification, cloning and expression of the mouse N-  
acetylglutamate synthase gene.  
AU Caldovic, Ljubica (1); Morizono, Hiroki; Yu, Xiaolin; Thompson, Mark; Shi,  
Dashuang; Gallegos, Rene; Allewell, Norma M.; Malamy, Michael H.; Tuchman,  
Mendel  
CS (1) Children's Research Institute, Children's National Medical Center,  
Washington, DC USA  
SO Pediatric Research, (April, 2002) Vol. 51, No. 4 Part 2, pp. 228A.  
<http://www.pedresearch.org/>. print.  
Meeting Info.: Annual Meeting of the Pediatric Societies' Baltimore, MD,  
USA May 04-07, 2002  
ISSN: 0031-3998.  
DT Conference  
LA English

L3 ANSWER 12 OF 29 MEDLINE DUPLICATE 7  
AN 2001652546 MEDLINE  
DN 21560951 PubMed ID: 11553611  
TI A new yeast metabolon involving at least the two first enzymes of arginine  
biosynthesis: acetylglutamate synthase activity requires complex formation  
with acetylglutamate kinase.  
AU Abadjieva A; Pauwels K; Hilven P; Crabeel M  
CS Department of Microbiology of the Vrije Universiteit Brussel, Belgium.  
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (2001 Nov 16) 276 (46) 42869-80.  
Journal code: 2985121R. ISSN: 0021-9258.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
EM 200112  
ED Entered STN: 20011114  
Last Updated on STN: 20030105  
Entered Medline: 20011226

L3 ANSWER 13 OF 29 MEDLINE DUPLICATE 8  
AN 20000158877 MEDLINE  
DN 20158877 PubMed ID: 10692366  
TI Evolution of arginine biosynthesis in the bacterial domain: novel  
gene-enzyme relationships from psychrophilic *Moritella* strains  
(Vibrionaceae) and evolutionary significance of N-alpha-acetyl  
ornithinase.  
AU Xu Y; Liang Z; Legrain C; Ruger H J; Glansdorff N  
CS Laboratory for Genetics and Microbiology, Vrije Universiteit Brussel  
(VUB), and Department of Microbiology, Flanders Interuniversity Institute  
for Biotechnology, B-1070 Brussels, Belgium.  
SO JOURNAL OF BACTERIOLOGY, (2000 Mar) 182 (6) 1609-15.  
Journal code: 2985120R. ISSN: 0021-9193.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals; Space Life Sciences  
OS GENBANK-AJ252020; GENBANK-AJ252021; GENBANK-AJ252022; GENBANK-AJ252023  
EM 200003  
ED Entered STN: 20000407  
Last Updated on STN: 20000407  
Entered Medline: 20000324

L3 ANSWER 14 OF 29 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
AN 2001:59656 BIOSIS  
DN PREV200100059656  
TI Differential diagnosis of hyperammonaemia: Ornithine transcarbamylase  
deficiency presenting with normal urinary orotic acid excretion.

AU Raiman, J. A. J. (1); Chamberlain, M. P.; Baker, A. J. (1); Dalton, R. N.  
CS (1) Department of Paediatric Hepatology, Kings College Hospital, London UK  
SO Journal of Inherited Metabolic Disease, (July, 2000) Vol. 23, No.  
Supplement 1, pp. 53. print.  
Meeting Info.: VIIIth International Conference on Inborn Errors of  
Metabolism England, Cambridge, UK September 13-17, 2000  
ISSN: 0141-8955.

DT Conference  
LA English  
SL English

L3 ANSWER 15 OF 29 MEDLINE DUPLICATE 9  
AN 1999439814 MEDLINE  
DN 99439814 PubMed ID: 10509023  
TI Disruption of six ORFs on *Saccharomyces cerevisiae* chromosome X: the  
YJL069c gene of unknown function is essential to cell viability.  
AU Vandenbol M; Portetelle D  
CS Unite de Microbiologie, Faculte Universitaire des Sciences Agronomiques de  
Gembloix, 6 Avenue Marechal Juin, B-5030 Gembloix, Belgium..  
vandenbol@sagx.ac.be  
SO YEAST, (1999 Sep 30) 15 (13) 1411-7.  
Journal code: 8607637. ISSN: 0749-503X.  
CY ENGLAND: United Kingdom  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
EM 199910  
ED Entered STN: 19991101  
Last Updated on STN: 19991101  
Entered Medline: 19991021

L3 ANSWER 16 OF 29 MEDLINE DUPLICATE 10  
AN 1998247316 MEDLINE  
DN 98247316 PubMed ID: 9572954  
TI Use of inducible feedback-resistant N-acetylglutamate  
synthetase (argA) genes for enhanced arginine  
biosynthesis by genetically engineered *Escherichia coli* K-12 strains.  
AU Rajagopal B S; DePonte J 3rd; Tuchman M; Malamy M H  
CS Department of Pediatrics, University of Minnesota, Minneapolis 55455, USA.  
NC 1PO1-HD32652 (NICHD)  
SO APPLIED AND ENVIRONMENTAL MICROBIOLOGY, (1998 May) 64 (5) 1805-11.  
Journal code: 7605801. ISSN: 0099-2240.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
OS GENBANK-AF008115; GENBANK-AF008116; GENBANK-AF008117; GENBANK-AF008118;  
GENBANK-AF008119  
EM 199805  
ED Entered STN: 19980609  
Last Updated on STN: 20000303  
Entered Medline: 19980528

L3 ANSWER 17 OF 29 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
AN 1999:104126 BIOSIS  
DN PREV199900104126  
TI N-Acetylglutamate synthetase deficiency: Favourable experience with  
carbamylglutamate.  
AU Morris, A. A. M. (1); Richmond, S. W. J.; Oddie, S. J.; Pourfarzam, M.;  
Worthington, V.; Leonard, J. V.  
CS (1) Dep. Child Health, Royal Victoria Infirmary, Newcastle-upon-Tyne NE1  
3LP UK  
SO Journal of Inherited Metabolic Disease, (Dec., 1998) Vol. 21, No. 8, pp.  
867-868.  
ISSN: 0141-8955.  
DT Article  
LA English

L3 ANSWER 18 OF 29 MEDLINE DUPLICATE 11

AN 97093974 MEDLINE  
DN 97093974 PubMed ID: 893945  
TI Acetylglutamate synthase from *Neurospora crassa*: structure and regulation of expression.  
AU Yu Y G; Turner G E; Weiss R L  
CS Department of Chemistry and Biochemistry, University of California, Los Angeles 90095-1569, USA.  
NC GM47631 (NIGMS)  
SO MOLECULAR MICROBIOLOGY, (1996 Nov) 22 (3) 545-54.  
CY ENGLAND: United Kingdom  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
OS GENBANK-L35484  
EM 199703  
ED Entered STN: 19970321  
Last Updated on STN: 19970321  
Entered Medline: 19970313

L3 ANSWER 19 OF 29 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.  
AN 95158726 EMBASE  
DN 1995158726  
TI N-acetylglutamate deficiency: Clinical and biochemical features.  
AU Colombo J.P.  
CS Department of Clinical Chemistry, Inselspital, University of Berne, 3010 Berne, Switzerland  
SO International Pediatrics, (1995) 10/1 (109-113).  
ISSN: 0885-6265 CODEN: INPDEV  
CY United States  
DT Journal; Conference Article  
FS 005 General Pathology and Pathological Anatomy  
007 Pediatrics and Pediatric Surgery  
008 Neurology and Neurosurgery  
022 Human Genetics  
029 Clinical Biochemistry  
LA English  
SL English

L3 ANSWER 20 OF 29 HCAPLUS COPYRIGHT 2003 ACS  
AN 1993:490007 HCAPLUS  
DN 119:90007  
TI Primary structure, partial purification and regulation of key enzymes of the acetyl cycle of arginine biosynthesis in *Bacillus stearothermophilus*: dual function of ornithine acetyltransferase  
AU Sakanyan, Vehary; Charlier, Daniel; Legrain, Christianne; Kochikyan, Anahit; Mett, Igor; Pierard, Andre; Glansdorff, Nicolas  
CS Pharmagen, Yerevan, 375010, Armenia  
SO Journal of General Microbiology (1993), 139(3), 393-402  
CODEN: JGMIAN; ISSN: 0022-1287  
DT Journal  
LA English

=> d 21-29

L3 ANSWER 21 OF 29 SCISEARCH COPYRIGHT 2003 THOMSON ISIDUPLICATE 12  
AN 93:407267 SCISEARCH  
GA The Genuine Article (R) Number: LJ397  
TI DNA-SEQUENCE CONSERVATION AT THE GENE LEVEL IN A CONSERVED CHROMOSOMAL SEGMENT IN 2 PSEUDOMONAS SPECIES  
AU DHARMSTHITI S (Reprint); KRISHNAPILLAI V  
CS MONASH UNIV, DEPT GENET & DEV BIOL, CLAYTON, VIC 3168, AUSTRALIA  
CYA AUSTRALIA  
SO JOURNAL OF GENETICS, (APR 1993) Vol. 72, No. 1, pp. 1-14.  
ISSN: 0022-1333.  
DT Article; Journal  
FS LIFE  
LA ENGLISH

REC Reference Count: 31

\*ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS\*

L3 ANSWER 22 OF 29 HCAPLUS COPYRIGHT 2003 ACS

AN 1989:110608 HCAPLUS

DN 110:110608

TI Acetylglutamate synthase in *Neurospora crassa*: characterization, localization, and genetic behavior of a regulatory enzyme of arginine biosynthesis

AU Jacobson, Jill Ann

CS Univ. California, Los Angeles, CA, USA

SO (1988) 131 pp. Avail.: Univ. Microfilms Int., Order No. DA8810897

From: Diss. Abstr. Int. B 1988, 47(5), 1672

DT Dissertation

LA English

L3 ANSWER 23 OF 29 HCAPLUS COPYRIGHT 2003 ACS

AN 1989:129896 HCAPLUS

DN 110:129896

TI Transformation of *Corynebacterium* and *Brevibacterium* with plasmids encoding arginine biosynthesis enzymes and arginine manufacture with the transformants

IN Katsumata, Ryoichi; Yokoi, Haruhiko

PA Kyowa Hakko Kogyo Co., Ltd., Japan

SO Eur. Pat. Appl., 12 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 261627	A2	19880330	EP 1987-113780	19870921
	EP 261627	A3	19891004		
	EP 261627	B1	19930421		
	R: DE, FR, GB				
	JP 63079597	A2	19880409	JP 1986-224189	19860922
	JP 07028749	B4	19950405		
	US 5017482	A	19910521	US 1987-99798	19870922
PRAI	JP 1986-224189		19860922		

L3 ANSWER 24 OF 29 LIFESCI COPYRIGHT 2003 CSA DUPLICATE 13

AN 87:57092 LIFESCI

TI Complete nucleotide sequence of the *Escherichia coli* argA gene.

AU Brown, K.; Finch, P.W.; Hickson, I.D.; Emmerson, P.T.

CS Dep. Biochem., Med. Sch., Univ. Newcastle upon Tyne, Newcastle upon Tyne NE2 4HH, UK

SO NUCLEIC ACIDS RES., (1987) vol. 15, no. 24, p. 10586.

DT Journal

FS J; N; G; L

LA English

L3 ANSWER 25 OF 29 HCAPLUS COPYRIGHT 2003 ACS

AN 1986:221189 HCAPLUS

DN 104:221189

TI N-Acetyl-L-glutamate synthase of *Neurospora crassa*. Characteristics, localization, regulation, and genetic control

AU Hinde, Richard W.; Jacobson, Jill A.; Weiss, Richard L.; Davis, Rowland H.

CS Sch. Biol. Sci., Macquarie Univ., North Ryde, 2113, Australia

SO Journal of Biological Chemistry (1986), 261(13), 5848-52

CODEN: JBCHA3; ISSN: 0021-9258

DT Journal

LA English

L3 ANSWER 26 OF 29 MEDLINE DUPLICATE 14

AN 86195911 MEDLINE

DN 86195911 PubMed ID: 3516981

TI Instability of an arginine-overproducing mutant of *Serratia marcescens* and its stabilization.

AU Takagi T; Sugiura M; Kisumi M

SO JOURNAL OF BIOCHEMISTRY, (15 Feb) 99 (2) 357-64.  
Journal code: 0376600. ISSN: 0021-924X.

CY Japan

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 198606

ED Entered STN: 19900321  
Last Updated on STN: 19900321  
Entered Medline: 19860609

L3 ANSWER 27 OF 29 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 15

AN 1985:314693 BIOSIS

DN BA79:94689

TI A 2-STEP PURIFICATION OF ATP-CITRATE LYASE EC-4.1.3.8 FROM RAT LIVER AND ITS USE IN A FLUOROMETRIC ASSAY FOR N ACETYLGLUTAMATE SYNTHETASE EC-2.3.1.1.

AU WRAIGHT C; DAY A; HOOGENRAAD N; SCOPES R

CS DEPARTMENT BIOCHEMISTRY, LA TROBE UNIVERSITY, BUNDOORA, VICTORIA 3083, AUSTRALIA.

SO ANAL BIOCHEM, (1985) 144 (2), 604-609.  
CODEN: ANBCA2. ISSN: 0003-2697.

FS BA; OLD

LA English

L3 ANSWER 28 OF 29 MEDLINE DUPLICATE 16

AN 83210185 MEDLINE

DN 83210185 PubMed ID: 6852246

TI Effect of starvation on the N-acetylglutamate system of rat liver.

AU Gomez M; Jorda A; Cabo J; Grisolia S

SO FEBS LETTERS, (1983 May 30) 156 (1) 119-22.  
Journal code: 0155157. ISSN: 0014-5793.

CY Netherlands

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 198307

ED Entered STN: 19900319  
Last Updated on STN: 19980206  
Entered Medline: 19830715

L3 ANSWER 29 OF 29 HCAPLUS COPYRIGHT 2003 ACS

AN 1976:161684 HCAPLUS

DN 84:161684

TI Expression of the argA gene carried by a defective lambda bacteriophage of Escherichia coli

AU Leisinger, Thomas; Haas, Dieter; Kelker, Norman

CS Mikrobiol. Inst., ETH, Zurich, Switz.

SO Journal of Bacteriology (1976), 125(3), 1217-19  
CODEN: JOBAAY; ISSN: 0021-9193

DT Journal

LA English

=> d 16, 20, 24 ab

L3 ANSWER 16 OF 29 MEDLINE DUPLICATE 10

AB The goal of this work was to construct *Escherichia coli* strains capable of enhanced arginine production. The arginine biosynthetic capacity of previously engineered *E. coli* strains with a derepressed arginine regulon was limited by the availability of endogenous ornithine (M. Tuchman, B. S. Rajagopal, M. T. McCann, and M. H. Malamy, *Appl. Environ. Microbiol.* 63:33-38, 1997). Ornithine biosynthesis is limited due to feedback inhibition by arginine of N-acetylglutamate synthetase (NAGS), the product of the argA gene and the first enzyme in the pathway of arginine biosynthesis in *E. coli*. To circumvent this inhibition, the argA genes from *E. coli* mutants with feedback-resistant (fbr) NAGS were cloned into plasmids that contain "arg boxes," which titrate the ArgR repressor

protein, with or without the *E. coli* *carAB* genes encoding carbamyl phosphate synthetase and the *argI* gene for ornithine transcarbamylase. The free arginine production rates of "arg-derepressed" *E. coli* cells overexpressing plasmid-encoded *carAB*, *argI*, and *fbr argA* genes were 3- to 15-fold higher than that of an equivalent system overexpressing feedback-sensitive wild-type (wt) *argA*. The expression system with *fbr argA* produced 7- to 35-fold more arginine than a system overexpressing *carAB* and *argI* genes on a plasmid in a strain with a wt *argA* gene on the chromosome. The arginine biosynthetic capacity of arg-derepressed DH5 alpha strains with plasmids containing only the *fbr argA* gene was similar to that of cells with plasmids also containing the *carAB* and *argI* genes. Plasmids containing wt or *fbr argA* were stably maintained under normal growth conditions for at least 18 generations. DNA sequencing identified different point mutations in each of the *fbr argA* mutants, specifically H15Y, Y19C, S54N, R58H, G287S, and Q432R.

L3 ANSWER 20 OF 29 HCAPLUS COPYRIGHT 2003 ACS

AB A 3.4 kb EcoRI fragment, cloned in *Escherichia coli*, that carries part of a cluster of genes encoding arginine biosynthetic functions of the thermophilic bacterium *Bacillus stearothermophilus*, was sequenced on both strands. The sequence consists of a truncated *argC* gene, an *argJ* region encoding a polypeptide with both N-acetylglutamate synthase and ornithine acetyltransferase activities, the *argB* gene and the N-terminal part of *argD*. The *argB* gene encodes a 258-amino-acid polypeptide with a deduced Mr of 26918. A very high and thermostable N-acetylglutamate 5-phototransferase activity was detected in exts. of *E. coli* *argB* mutants transformed with the 3.4 kb fragment on a plasmid. A polypeptide band of Mr 27,000 was detected by SDS-PAGE of heat-treated ext. from such a strain. Both N-acetylglutamate synthase and ornithine acetyltransferase are encoded by the same 1290 bp open reading frame. The deduced sequence of 410 amino acids corresponds to a peptide of Mr 43,349. The subcloned *B. stearothermophilus* *argJ* can complement a double *argA* *argE* *E. coli* mutant to prototrophy. Gel-filtration of a heat-treated ext. of the complemented double mutant *E. coli* host showed that N-acetylglutamate synthase and ornithine acetyltransferase activities co-elute in a single peak corresponding to Mr 110,000. Both activities were also heat-inactivated at the same temp. and strongly inhibited by ornithine. These results suggest that both activities can be ascribed to a single protein.

L3 ANSWER 24 OF 29 LIFESCI COPYRIGHT 2003 CSA DUPLICATE 13

AB The authors have sequenced the *E. coli* *argA* gene which encodes N-acetylglutamate synthase (EC 2.3.1.1.). The sequence is continuous with that reported previously for the *recD* gene, which included the stop codon for *argA*. Assignment of the initiation codon of *argA* to the GTG triplet at bp 244 is based upon N-terminal amino acid sequence analysis of purified N-acetylglutamate synthase, which also indicates that the N-terminal amino acid residue is removed. The predicted protein has a M sub(r) of 49,065, in close agreement with the subunit M sub(r) of 50,000 determined for the purified protein. The deduced amino acid sequences is also reported.

=> dis his

(FILE 'HOME' ENTERED AT 18:19:36 ON 25 JUN 2003)

FILE 'MEDLINE, SCISEARCH, LIFESCI, BIOTECHDS, BIOSIS, EMBASE, HCAPLUS, NTIS, ESBIOBASE, BIOTECHNO, WPIDS' ENTERED AT 18:20:20 ON 25 JUN 2003

L1 609 S ACETYLGLUTAM? (3W) (SYNTHASE OR SYNTHETASE)

L2 94 S L1 (5A) (GENE? OR DNA OR NUCLE?)

L3 29 DUP REM L2 (65 DUPLICATES REMOVED)

=> s l1 (5a) coli

L4 48 L1 (5A) COLI

=> dup rem 14

PROCESSING COMPLETED FOR L4

L5 15 DUP REM L4 (33 DUPLICATES REMOVED)

=> d 1-10

L5 ANSWER 1 OF 15 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI  
AN 2002-10205 BIOTECHDS  
TI Novel mutant N-acetylglutamate synthase which desensitizes feedback  
inhibition by L-arginine, useful in biosynthesis of arginine by  
Escherichia coli;  
vector-mediated gene transfer and expression in host cell for strain  
improvement  
AU PTITSYN L R; ALTMAN I B; SMIRNOV S V; ROSTOVA Y G; YAMPOLSKAYA T A;  
LEONOVA T V; GUSYATINER M M  
PA AJINOMOTO CO INC  
PI EP 1170361 9 Jan 2002  
AI EP 2000-114572 28 Jun 2000  
PRAI RU 2001-112869 15 May 2001  
DT Patent  
LA English  
OS WPI: 2002-165893 [22]

L5 ANSWER 2 OF 15 HCAPLUS COPYRIGHT 2003 ACS  
AN 2002:519178 HCAPLUS  
DN 137:258271  
TI Identification, cloning and expression of the mouse N-acetylglutamate  
synthase gene  
AU Caldovic, Ljubica; Morizono, Hiroki; Yu, Xiaolin; Thompson, Mark; Shi,  
Dashuang; Gallegos, Rene; Allewell, Norma M.; Malamy, Michael H.; Tuchman,  
Mendel  
CS Children's Research Institute, Children's National Medical Center, George  
Washington University, Washington, DC, 20010, USA  
SO Biochemical Journal (2002), 364(3), 825-831  
CODEN: BIJOAK; ISSN: 0264-6021  
PB Portland Press Ltd.  
DT Journal  
LA English  
RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 15 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI  
AN 2003-00568 BIOTECHDS  
TI Cloning and expression of the human N-acetylglutamate synthase gene;  
recombinant protein production and purification useful for genomics  
analysis and diagnosis  
AU CALDOVIC L; MORIZONO H; PANGLAO MG; GALLEGOS R; YU XL; SHI DS; MALAMY MH;  
ALLEWELL NM; TUCHMAN M  
CS George Washington Univ; Tufts Univ; Univ Maryland  
LO Tuchman M, George Washington Univ, Childrens Natl Med Ctr, Childrens Res  
Inst, 111 Michigan Ave NW, Washington, DC 20010 USA  
SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS; (2002) 299, 4,  
581-586 ISSN: 0006-291X  
DT Journal  
LA English

L5 ANSWER 4 OF 15 MEDLINE DUPLICATE 2  
AN 1998154436 MEDLINE  
DN 98154436 PubMed ID: 9493385  
TI Genes and enzymes of the acetyl cycle of arginine biosynthesis in the  
extreme thermophilic bacterium *Thermus thermophilus* HB27.  
AU Baetens M; Legrain C; Boyen A; Glansdorff N  
CS Universiteit Brussel, Belgium.  
SO MICROBIOLOGY, (1998 Feb) 144 ( Pt 2) 479-92.  
Journal code: 9430468. ISSN: 1350-0872.  
CY ENGLAND: United Kingdom  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
OS GENBANK-Y10525  
EM 199804  
ED Entered STN: 19980430

Last Updated on STN: 19980  
Entered Medline: 19980421

L5 ANSWER 5 OF 15 MEDLINE DUPLICATE 3  
AN 1998088945 MEDLINE  
DN 98088945 PubMed ID: 9428669  
TI Characterization of the *Saccharomyces cerevisiae* ARG7 gene encoding ornithine acetyltransferase, an enzyme also endowed with acetylglutamate synthase activity.  
AU Crabeel M; Abadjieva A; Hilven P; Desimpelaere J; Soetens O  
CS Department of Microbiology of the Vrije Universiteit Brussel, Brussels, Belgium.  
SO EUROPEAN JOURNAL OF BIOCHEMISTRY, (1997 Dec 1) 250 (2) 232-41.  
Journal code: 0107600. ISSN: 0014-2956.  
CY GERMANY: Germany, Federal Republic of  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
OS GENBANK-S52822  
EM 199801  
ED Entered STN: 19980130  
Last Updated on STN: 19980130  
Entered Medline: 19980122

L5 ANSWER 6 OF 15 MEDLINE DUPLICATE 4  
AN 93232760 MEDLINE  
DN 93232760 PubMed ID: 8473852  
TI Primary structure, partial purification and regulation of key enzymes of the acetyl cycle of arginine biosynthesis in *Bacillus stearothermophilus*: dual function of ornithine acetyltransferase.  
AU Sakanyan V; Charlier D; Legrain C; Kochikyan A; Mett I; Pierard A; Glansdorff N  
CS Pharmagen, Yerevan, Republic of Armenia.  
SO JOURNAL OF GENERAL MICROBIOLOGY, (1993 Mar) 139 ( Pt 3) 393-402.  
Journal code: 0375371. ISSN: 0022-1287.  
CY ENGLAND: United Kingdom  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
OS GENBANK-L06036  
EM 199305  
ED Entered STN: 19930604  
Last Updated on STN: 19930604  
Entered Medline: 19930520

L5 ANSWER 7 OF 15 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI  
AN 1988-06169 BIOTECHDS  
TI New *Corynebacterium* and *Brevibacterium* strains; contain recombinant DNA and produce L-arginine in higher yields  
PA Kyowa-Hakko  
PI EP 261627 30 Mar 1988  
AI EP 1987-113780 21 Sep 1987  
PRAI JP 1986-224189 22 Sep 1986  
DT Patent  
LA English  
OS WPI: 1988-085929 [13]

L5 ANSWER 8 OF 15 LIFESCI COPYRIGHT 2003 CSA DUPLICATE 6  
AN 87:57092 LIFESCI  
TI Complete nucleotide sequence of the *Escherichia coli* argA gene.  
AU Brown, K.; Finch, P.W.; Hickson, I.D.; Emmerson, P.T.  
CS Dep. Biochem., Med. Sch., Univ. Newcastle upon Tyne, Newcastle upon Tyne NE2 4HH, UK  
SO NUCLEIC ACIDS RES., (1987) vol. 15, no. 24, p. 10586.  
DT Journal  
FS J; N; G; L  
LA English

L5 ANSWER 9 OF 15 MEDLINE DUPLICATE 7

AN 77187802 MEDLINE  
DN 77187802 PubMed ID: 16890  
TI **N-acetylglutamate synthase of Escherichia coli**  
: purification, characterization, and molecular properties.  
AU Marvil D K; Leisinger T  
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1977 May 25) 252 (10) 3295-303.  
Journal code: 2985121R. ISSN: 0021-9258.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
EM 197707  
ED Entered STN: 19900314  
Last Updated on STN: 19950206  
Entered Medline: 19770723

L5 ANSWER 10 OF 15 MEDLINE DUPLICATE 8  
AN 75095646 MEDLINE  
DN 75095646 PubMed ID: 1089665  
TI **N-Acetylglutamate synthase of Escherichia coli**  
regulation of synthesis and activity by arginine.  
AU Leisinger T; Haas D  
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1975 Mar 10) 250 (5) 1690-3.  
Journal code: 2985121R. ISSN: 0021-9258.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
EM 197505  
ED Entered STN: 19900310  
Last Updated on STN: 19970203  
Entered Medline: 19750521

=> d 11-15

L5 ANSWER 11 OF 15 SCISEARCH COPYRIGHT 2003 THOMSON ISI  
AN 75:90791 SCISEARCH  
GA The Genuine Article (R) Number: V8871  
TI **N-ACETYLGLUTAMATE SYNTHASE OF ESCHERICHIA-COLI**  
REGULATION OF SYNTHESIS AND ACTIVITY BY ARGININE  
AU LEISINGER T (Reprint); HAAS D  
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1975) Vol. 250, No. 5, pp. 1690-1693.  
DT Article; Journal  
LA ENGLISH  
REC Reference Count: 22

L5 ANSWER 12 OF 15 MEDLINE DUPLICATE 9  
AN 76050850 MEDLINE  
DN 76050850 PubMed ID: 1102931  
TI Isolation and characterization of mutants with a feedback resistant N-  
acetylglutamate synthase in Escherichia coli K  
12.  
AU Eckhardt T; Leisinger T  
SO MOLECULAR AND GENERAL GENETICS, (1975 Jun 19) 138 (3) 225-32.  
Journal code: 0125036. ISSN: 0026-8925.  
CY GERMANY, WEST: Germany, Federal Republic of  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
EM 197601  
ED Entered STN: 19900313  
Last Updated on STN: 19980206  
Entered Medline: 19760123

L5 ANSWER 13 OF 15 MEDLINE DUPLICATE 10  
AN 74277268 MEDLINE  
DN 74277268 PubMed ID: 4602003  
TI In vitro assay and some properties of N-acetylglutamate

AU synthetase from Escherichia coli.  
AU Haas D; Leisinger T  
SO PATHOLOGIA ET MICROBIOLOGIA, (1974) 40 (3) 140-1.  
Journal code: 0401122. ISSN: 0031-2959.  
CY Switzerland  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
EM 197409  
ED Entered STN: 19900310  
Last Updated on STN: 19900310  
Entered Medline: 19740928

L5 ANSWER 14 OF 15 SCISEARCH COPYRIGHT 2003 THOMSON ISI  
AN 74:218877 SCISEARCH  
GA The Genuine Article (R) Number: T3792  
TI INVITRO ASSAY AND SOME PROPERTIES OF N-ACETYLGLUTAMATE  
SYNTHETASE FROM ESCHERICHIA-COLI  
AU HAAS D (Reprint); LEISINGE.T  
CS EIDGENOSSIS TECH HSCH, MIKROBIOL INST, CH-8006 ZURICH, SWITZERLAND  
CYA SWITZERLAND  
SO PATHOLOGIA ET MICROBIOLOGIA, (1974) Vol. 40, No. 3-4, pp. 140-141.  
DT Article; Journal  
LA ENGLISH  
REC Reference Count: 3

L5 ANSWER 15 OF 15 MEDLINE DUPLICATE 11  
AN 62189958 MEDLINE  
DN 62189958  
TI Feedback inhibition of acetylglutamate synthetase by  
arginine in Escherichia coli.  
AU VYAS S; MAAS W K  
SO Arch Biochem, (1963 Mar) 100 542-6.  
DT Journal  
LA English  
FS OLDMEDLINE  
EM 196312  
ED Entered STN: 19990716  
Last Updated on STN: 19990716

=> d 5, 12 ab

L5 ANSWER 5 OF 15 MEDLINE DUPLICATE 3  
AB We have cloned by functional complementation and characterized the yeast  
ARG7 gene encoding mitochondrial ornithine acetyltransferase, the enzyme  
catalyzing the fifth step in arginine biosynthesis. While forming  
ornithine, this enzyme regenerates acetylglutamate, also produced in the  
first step by the ARG2-encoded acetylglutamate synthase. Interestingly,  
total deletion of the genomic ARG7 ORF resulted in an arginine-leaky  
phenotype, indicating that yeast cells possess an alternative route for  
generating ornithine from acetylornithine. Yeast ornithine  
acetyltransferase has been purified and characterized previously as a  
heterodimer of two subunits proposed to derive from a single precursor  
protein [Liu, Y-S., Van Heeswijk R., Hoj, P. & Hoogenraad, N. (1995) Eur.  
J. Biochem. 228, 291-296]; those authors further suggested that the  
internal processing of Arg7p, which is a mitochondrial enzyme, might occur  
in the matrix, while the leader peptide would be of the  
non-cleavable-type. The characterization of the gene (a) establishes that  
Arg7p is indeed encoded by a single gene, (b) demonstrates the existence  
of a cleaved mitochondrial prepeptide of eight residues, and (c) shows  
that the predicted internal processing site is unlike the mitochondrial  
proteolytic peptidase target sequence. Yeast Arg7p shares between 32-43%  
identity in pairwise comparisons with the ten analogous bacterial ArgJ  
enzymes characterized. Among these evolutionarily related enzymes, some  
but not all appear bifunctional, being able to produce acetylglutamate not  
only from acetylornithine but also from acetyl-CoA, thus catalyzing the  
same reaction as the apparently unrelated acetylglutamate synthase. We  
have addressed the question of the bifunctionality of the eucaryotic

enzyme, showing that overexpressed ARG7 can complement yeast *arg2* and *Escherichia coli* *argA* mutations (affecting **acetylglutamate synthase**). Furthermore, Arg7p-linked acetylglutamate synthase activity was measurable in an assay. The yeast enzyme is thus clearly, albeit modestly, bifunctional. As with several bacterial ornithine acetyltransferases, the activity of Arg7p was practically insensitive to arginine but strongly inhibited by ornithine, which behaved as a competitive inhibitor.

L5 ANSWER 12 OF 15 MEDLINE DUPLICATE 9  
AB Mutants with a feedback resistant N-acetylglutamate synthase have been isolated from a proA/B, *argD*, *argR* strain by screening for proline excretion on minimal medium with arginine. The feedback resistant character of three mutants was transduced into an *argA* (N-acetylglutamate synthase negative) strain. It was cotransducible with *argA* at a frequency of greater than 99%. N-acetylglutamate synthase extracted from the three mutants was approximately one hundred times less sensitive to L-arginine than the enzyme from the feedback sensitive parent strain.

=> s argj (5a) coli  
L6 17 ARGJ (5A) COLI

=> s l6 and arga  
L7 9 L6 AND ARGA

=> dup rem 17  
PROCESSING COMPLETED FOR L7  
L8 2 DUP REM L7 (7 DUPLICATES REMOVED)

=> d 1,2

L8 ANSWER 1 OF 2 MEDLINE DUPLICATE 1  
AN 2000495139 MEDLINE  
DN 20389546 PubMed ID: 10931207  
TI Characterization and kinetic mechanism of mono- and bifunctional ornithine acetyltransferases from thermophilic microorganisms.  
AU Marc F; Weigel P; Legrain C; Almeras Y; Santrot M; Glansdorff N; Sakanyan V  
CS FRE-CNRS 2230 Biocatalyse, Laboratoire de Biotechnologie, Universite de Nantes, France.  
SO EUROPEAN JOURNAL OF BIOCHEMISTRY, (2000 Aug) 267 (16) 5217-26.  
Journal code: 0107600. ISSN: 0014-2956.  
CY GERMANY: Germany, Federal Republic of  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
EM 200010  
ED Entered STN: 20001027  
Last Updated on STN: 20001027  
Entered Medline: 20001018

L8 ANSWER 2 OF 2 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
AN 1992:192819 BIOSIS  
DN BA93:103769  
TI A RE-EXAMINATION OF THE PATHWAY FOR ORNITHINE BIOSYNTHESIS IN A THERMOPHILIC AND TWO MESOPHILIC BACILLUS-SPP.  
AU SAKANYAN V; KOCHIKYAN A; METT I; LEGRAIN C; CHARLIES D; PIERARD A; GLANSDORFF N  
CS RES. INST., CERIA-COOVI, 1 AVE. EMILE GRYSON, B-1070 BRUSSELS, BELG.  
SO J GEN MICROBIOL, (1992) 138 (1), 125-130.  
CODEN: JGMIAN. ISSN: 0022-1287.  
FS BA; OLD  
LA English

=> d 1,2 ab

L8 ANSWER 1 OF 2 MEDLINE DUPLICATE 1

AB The *argJ* gene coding for N2-acetyl-L-ornithine: L-glutamate N-acetyltransferase, the key enzyme involved in the acetyl cycle of L-arginine biosynthesis, has been cloned from thermophilic prokaryotes: the archaeon *Methanoccoccus jannaschii*, and the bacteria *Thermotoga neapolitana* and *Bacillus stearothermophilus*. Archaeal *argJ* only complements an *Escherichia coli* *argE* mutant (deficient in acetylornithinase, which catalyzes the fifth step in the linear biosynthetic pathway), whereas bacterial genes additionally complement an *argA* mutant (deficient in N-acetylglutamate synthetase, the first enzyme of the pathway). In keeping with these *in vivo* data the purified His-tagged ArgJ enzyme of *M. jannaschii* only catalyzes N2-acetylornithine conversion to ornithine, whereas *T. neapolitana* and *B. stearothermophilus* ArgJ also catalyze the conversion of glutamate to N-acetylglutamate using acetylCoA as the acetyl donor. *M. jannaschii* ArgJ is therefore a monofunctional enzyme, whereas *T. neapolitana* and *B. stearothermophilus* encoded ArgJ are bifunctional. Kinetic data demonstrate that in all three thermophilic organisms ArgJ-mediated catalysis follows ping-pong bi-bi kinetic mechanism. Acetylated ArgJ intermediates were detected in semireactions using [<sup>14</sup>C]acetylCoA or [<sup>14</sup>C]N2-acetyl-L-glutamate as acetyl donors. In this catalysis L-ornithine acts as an inhibitor; this amino acid therefore appears to be a key regulatory molecule in the acetyl cycle of L-arginine synthesis. Thermophilic ArgJ are synthesized as protein precursors undergoing internal cleavage to generate alpha and beta subunits which appear to assemble to alpha<sub>2</sub>beta<sub>2</sub> heterotetramers in *E. coli*. The cleavage occurs between alanine and threonine residues within the highly conserved PXM-ATML motif detected in all available ArgJ sequences.

L8 ANSWER 2 OF 2 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
AB The expression of *Bacillus stearothermophilus* genes complementing arginine auxotrophs of *Escherichia coli* was studied. The activity responsible for the formation of ornithine in *B. stearothermophilus* was identified as a repressible ornithine acetyltransferase (genetic symbol *arg J*) encoded by the same DNA fragment as the *argC*, *argA* and *argB* genes. *Bacillus subtilis* and *Bacillus licheniformis* displayed the same pattern of enzyme activities as *B. stearothermophilus*. In contrast to previous reports, these organisms consequently use the cyclic pathway of ornithine biosynthesis. *B. stearothermophilus* also possesses a broad specificity aminoacylase which exhibits low affinity towards N2-acetyl-L-ornithine.

=> dup rem 16  
PROCESSING COMPLETED FOR L6  
L9 4 DUP REM L6 (13 DUPLICATES REMOVED)

=> d 1-4

L9 ANSWER 1 OF 4 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI  
AN 2002-16737 BIOTECHDS  
TI Microorganism for the production of L-arginine, comprises a recombinant DNA gene coding for an enzyme having ornithine acetyltransferase activity;  
involving recombinant vector plasmid DNA-mediated ornithine-acetyltransferase and expression in *Escherichia coli* culture medium  
optimization and fermentation  
AU SAKANYAN V; MARC F; HOVSEPYAN A; LECOCQ M  
PA AJINOMOTO CO INC  
PI EP 1201758 2 May 2002  
AI EP 2000-403003 27 Oct 2000  
PRAI EP 2000-403003 27 Oct 2000  
DT Patent  
LA English  
OS WPI: 2002-428567 [46]

L9 ANSWER 2 OF 4 MEDLINE DUPLICATE 2  
AN 2000495139 MEDLINE  
DN 20389546 PubMed ID: 10931207  
TI Characterization and kinetic mechanism of mono- and bifunctional ornithine acetyltransferases from thermophilic microorganisms.

AU Marc F; Weigel P; Legrain C; Almeras Y; Santrot M; Glansdorff N; Sakanyan V  
CS FRE-CNRS 2230 Biocatalyse, Laboratoire de Biotechnologie, Universite de Nantes, France.  
SO EUROPEAN JOURNAL OF BIOCHEMISTRY, (2000 Aug) 267 (16) 5217-26.  
Journal code: 0107600. ISSN: 0014-2956.  
CY GERMANY: Germany, Federal Republic of  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
EM 2000010  
ED Entered STN: 20001027  
Last Updated on STN: 20001027  
Entered Medline: 20001018

L9 ANSWER 3 OF 4 LIFESCI COPYRIGHT 2003 CSA DUPLICATE 3  
AN 94:97080 LIFESCI  
TI Cloning and expression in Escherichia coli of a Streptomyces coelicolor A3 (2) argCJB gene cluster  
AU Hindle, Z.; Callis, R.; Dowden, S.; Rudd, B.A.M.; Baumberg, S.  
CS Dep. Biochem. and Appl. Mol. Biol., UMIST, Manchester M60 1QD, UK  
SO MICROBIOLOGY, (1994) vol. 140, no. 2, pp. 311-320.  
ISSN: 1350-0872.

DT Journal  
FS J; N; G  
LA English  
SL English

L9 ANSWER 4 OF 4 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
AN 1992:192819 BIOSIS  
DN BA93:103769  
TI A RE-EXAMINATION OF THE PATHWAY FOR ORNITHINE BIOSYNTHESIS IN A THERMOPHILIC AND TWO MESOPHILIC BACILLUS-SPP.  
AU SAKANYAN V; KOCHIKYAN A; METT I; LEGRAIN C; CHARLIES D; PIERARD A; GLANSDORFF N  
CS RES. INST., CERIA-COOVI, 1 AVE. EMILE GRYSON, B-1070 BRUSSELS, BELG.  
SO J GEN MICROBIOL, (1992) 138 (1), 125-130.  
CODEN: JGMIAN. ISSN: 0022-1287.  
FS BA; OLD  
LA English

=> d 1 ab

L9 ANSWER 1 OF 4 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI  
AB DERWENT ABSTRACT:  
NOVELTY - A microorganism that produces L-arginine through a biosynthetic or cyclic pathway, and that bears a recombinant DNA comprising a gene, argJ, coding for an enzyme having an ornithine acetyltransferase activity, is new.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for producing L-arginine comprising cultivating the new microorganism in a culture medium to produce and accumulate L-arginine in the medium, and recovering L-arginine from the medium.

BIOTECHNOLOGY - Preferred Microorganism: The microorganism preferably synthesizes L-arginine through the biosynthetic linear pathway. The argJ gene codes for a bifunctional enzyme having both ornithine acetyltransferase and acetylglutamate synthetase activity. The enzyme is devoid of inhibition by L-arginine. The microorganism is *Escherichia coli*. The argJ gene is derived from a thermophilic microorganism, preferably *Bacillus stearothermophilus* or *Thermokoga neapolitana*. The microorganism harbors a further recombinant DNA comprising a gene coding for N-acetylglutamate synthase. The recombinant DNA is plasmid DNA present at a low or moderate copy number. Preparation: The microorganism is produced by standard recombinant techniques.

USE - The microorganism is used for producing L-arginine (claimed) by fermentation.

EXAMPLE - No relevant example is given. (14 pages)

=> dis his

(FILE 'HOME' ENTERED AT 18:19:36 ON 25 JUN 2003)

FILE 'MEDLINE, SCISEARCH, LIFESCI, BIOTECHDS, BIOSIS, EMBASE, HCAPLUS, NTIS, ESBIOBASE, BIOTECHNO, WPIDS' ENTERED AT 18:20:20 ON 25 JUN 2003

L1 609 S ACETYLGLUTAM? (3W) (SYNTHASE OR SYNTHETASE)  
L2 94 S L1 (5A) (GENE? OR DNA OR NUCLE?)  
L3 29 DUP REM L2 (65 DUPLICATES REMOVED)  
L4 48 S L1 (5A) COLI  
L5 15 DUP REM L4 (33 DUPLICATES REMOVED)  
L6 17 S ARGJ (5A) COLI  
L7 9 S L6 AND ARGA  
L8 2 DUP REM L7 (7 DUPLICATES REMOVED)  
L9 4 DUP REM L6 (13 DUPLICATES REMOVED)

=> log h

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-0.65	-0.65

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